

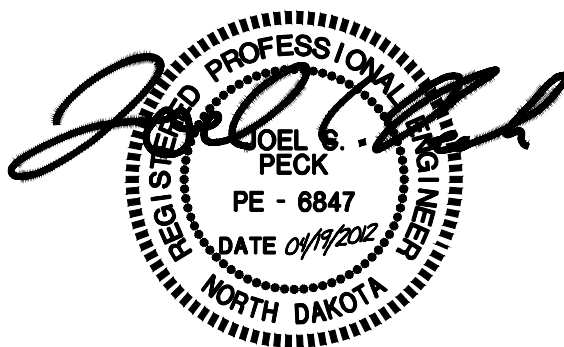


Dept. of Veterans Affairs  
Medical Center  
2101 Elm Street North  
Fargo, ND 58102



IMAGE GROUP INC.  
403 CENTER AVENUE, SUITE 300  
MOORHEAD, MN 56560

IMAGE GROUP INC., Architecture & Interiors  
OBERMILLER NELSON ENGINEERING, Mechanical Engineers  
MBN ENGINEERING, Electrical Engineers



Drawing Title		Project Title			Date
EMERGENCY WATER SUPPLY PLUMBING PLAN		VA MEDICAL CENTER INSTALL EMERGENCY WATER SUPPLY SYSTEM			APRIL 20, 2012
VA Project No.	Contract No.	Designed By	Checked By	Drawn By	Drawing No.
437-12-104	VA263-P-1217 VA263-C-	JP	JP	MW	P1
Building No.	AutoCAD File Name	Location		Dwg. 2 of 3	
10	2012039-P1.dwg	VA MEDICAL CENTER FARGO, ND			

MECHANICAL ABBREVIATIONS			
Ø	AT	HW	HOT WATER
ACCU	AIR COOLED CONDENSING UNIT	I/S	IN JOST SPACE
AFF	ABOVE FINISHED FLOOR	I.W.S.	IN WEB SPACE
AFM	AIRFLOW MEASURING DEVICE	KW	KILOWATT
AHU	AIR HANDLING UNIT	LAT	LEAVING AIR TEMPERATURE
ARCH	ARCHITECT, ARCHITECTURAL	LAV	LAVATORY
ATC	AUTOMATIC TEMPERATURE CONTROLS	LPHR	POUNDS PER HOUR
BDD	BACKDRAFT DAMPER	LWT	LEAVING WATER TEMPERATURE
BLDG	BUILDING	MA	MAKEUP AIR
BTUH	BRITISH THERMAL UNITS PER HOUR	MAU	MAKEUP AIR HANDLING UNIT
BV	BALL VALVE INDICATOR	MBH	ONE THOUSAND BTU PER HOUR
CA	COMBUSTION AIR	MCA	MINIMUM CIRCUIT AMPACITY
CC	COOLING COIL	MECH	MECHANICAL
CFM	CUBIC FEET PER MINUTE	MFS	MAXIMUM FUSE SIZE
CIRC	CIRCULATING	MISC	MISCELLANEOUS
CO	FLOOR CLEANOUT	MOD	MOTOR OPERATED DAMPER
CONC	CONCRETE	N/A	NOT APPLICABLE
COND	CONDENSATE	NC	NORMALLY CLOSED
CONN	CONNECTION	NIC	NOT IN CONTRACT
CUH	CABINET UNIT HEATER	NO	NORMALLY OPEN
CW	COLD WATER	NTS	NOT TO SCALE
DB	DECIBELS	OA	OUTSIDE AIR
DB	DRY BULB TEMPERATURE	ORD	OVERFLOW ROOF DRAIN
DEMO	DEMOLISH, DEMOLITION	ORL	OVERFLOW RAIN LEADER
DA	DIAMETER	PH	PHASE
DV	DIVISION	PRV	PRESSURE REDUCING VALVE
DN	DOWN	PSI	POUNDS PER SQUARE INCH
DWG	DRAWING	PV	POWER VENTILATOR
(E)	EXISTING	RA	RETURN AIR
EA	EXHAUST AIR	RD	ROOF DRAIN
EAT	ENTERING AIR TEMPERATURE	RH	ROOF HOOD
EER	ENERGY EFFICIENCY RATIO	RHW	REGRULATING HOT WATER
EF	EXHAUST FAN	RL	RAIN LEADER
ELEC	ELECTRIC, ELECTRICAL	RPM	REVOLUTIONS PER MINUTE
ESP	EXTERNAL STATIC PRESSURE	RTU	ROOFTOP AIR HANDLING UNIT
EW	ENTERING WATER TEMPERATURE	SA	SUPPLY AIR
EXH	EXHAUST	SD	STORM DRAIN
EXST	EXISTING	SEER	SEASONAL ENERGY EFFICIENCY RATIO
F	DEGREES FAHRENHEIT	SPEC	SPECIFICATION
F/SD	COMBINATION FIRE / SMOKE DAMPER	TA	TRANSFER AIR
FD	FIRE DAMPER	TR	TEMPERATURE RISE
FD	FLOOR DRAIN	TSP	TOTAL STATIC PRESSURE
FLEX	FLEXIBLE	TYP	TYPICAL
FLA	FULL LOAD AMPERAGE	UH	UNIT HEATER
FMD	FLOW MEASURING DEVICE (LIQUID)	V	SANITARY VENT
FTW	FEET PER MINUTE	VD	VOLUME DAMPER (MANUAL OPPOSED BLADE)
FTR	FINNED TUBE RADIATION	VER	VERIFY SIZE AND LOCATION
GALV	GALVANIZED	VAV	VARIABLE AIR VOLUME
GCO	GRADE CLEANOUT	VTR	VENT THROUGH ROOF
GPH	GALLONS PER HOUR	W	SANITARY WASTE
GPM	GALLONS PER MINUTE	WB	WET BULB TEMPERATURE
HB	HOSE BIBB	WCO	WALL CLEANOUT
HC	HEATING COIL	WH	WATER HEATER
HP	HOSE POWER	W/O	WITHOUT
HR	HOUR		
HVAC	HEATING, VENTILATION, AND AIR CONDITIONING		

MECHANICAL SYMBOLS	
DOMESTIC COLD WATER	UP
DOMESTIC HOT WATER	DN
DOMESTIC RECIRCULATING HOT WATER	DN
SANITARY VENT	DN
SANITARY SEWER ABOVE GRADE	DN
SANITARY SEWER BELOW GRADE	DN
RAIN LEADER	DN
OVERFLOW RAIN LEADER	DN
STORM DRAIN BELOW GRADE	DN
HEATING WATER RETURN	DN
HEATING WATER SUPPLY	DN
GLYCOL HEATING RETURN	DN
GLYCOL HEATING SUPPLY	DN
CHILLED WATER RETURN	DN
CHILLED WATER SUPPLY	DN
HEAT PUMP WATER RETURN	DN
HEAT PUMP WATER SUPPLY	DN
HIGH PRESSURE STEAM	DN
MEDIUM PRESSURE STEAM	DN
LOW PRESSURE STEAM	DN
CONDENSATE DRAIN	DN
PUMPED CONDENSATE	DN
REFRIGERANT LIQUID	DN
REFRIGERANT SUCTON	DN
REFRIGERANT DISCHARGE	DN
HOT GAS BYPASS	DN
FUEL OIL RETURN	DN
FUEL OIL SUPPLY	DN
FUEL OIL VENT	DN
NATURAL GAS	DN
FIRM NATURAL GAS	DN
INTERFERIBLE NATURAL GAS	DN
PROPANE	DN
OXYGEN	DN
VACUUM	DN
NITROGEN	DN
NITROUS OXIDE	DN
MEDICAL AIR	DN
CARBON DIOXIDE	DN
COMPRESSED AIR	DN
PIPE DOWN	DN
PIPE UP	DN
BRANCH DOWN	DN
BRANCH UP	DN
BRANCH DOWN	DN
BRANCH UP	DN
PIPE BREAK	DN
PIPE CAP	DN
FLOW ARROW	DN
PIPE ANCHOR	DN
CONCENTRIC REDUCER	DN
UNION	DN
FLEXIBLE PIPE CONNECTION	DN
PIPE FLANGE	DN
BALL VALVE	DN
BALANCING VALVE	DN
BUTTERFLY VALVE	DN
GATE VALVE	DN
GATE ANGLE VALVE	DN
GLOBE VALVE	DN
GLOBE ANGLE VALVE	DN
CHECK VALVE	DN
SAFETY RELIEF VALVE	DN
SOLENOID VALVE	DN
PRESSURE REGULATOR VALVE	DN
PRESSURE REDUCING VALVE	DN
2-WAY CONTROL VALVE	DN
3-WAY CONTROL VALVE	DN
BALL VALVE INDICATOR	DN
FLOW MEASURING DEVICE (LIQUID)	DN
FLOW METER	DN
AUTOFLOW VALVE ASSEMBLY	DN
BALL VALVE / STRAINER ASSEMBLY	DN
STRAINER	DN
AUTOMATIC AIR VENT	DN
MANUAL AIR VENT	DN
FLOW SWITCH	DN
RPZ BACKFLOW PREVENTOR ASSEMBLY	DN
PRESSURE GAUGE	DN
SENSOR WELL	DN
THERMOMETER	DN
AQUASTAT	DN
STEAM TRAP	DN
INLINE PUMP	DN
MEDICAL AIR MEDICAL GAS OUTLET	DN
OXYGEN MEDICAL GAS OUTLET	DN
VACUUM MEDICAL GAS OUTLET	DN
NITROGEN MEDICAL GAS OUTLET	DN
NITROUS OXIDE MEDICAL GAS OUTLET	DN
WAGO MEDICAL GAS OUTLET	DN
NATURAL GAS MEDICAL GAS OUTLET	DN

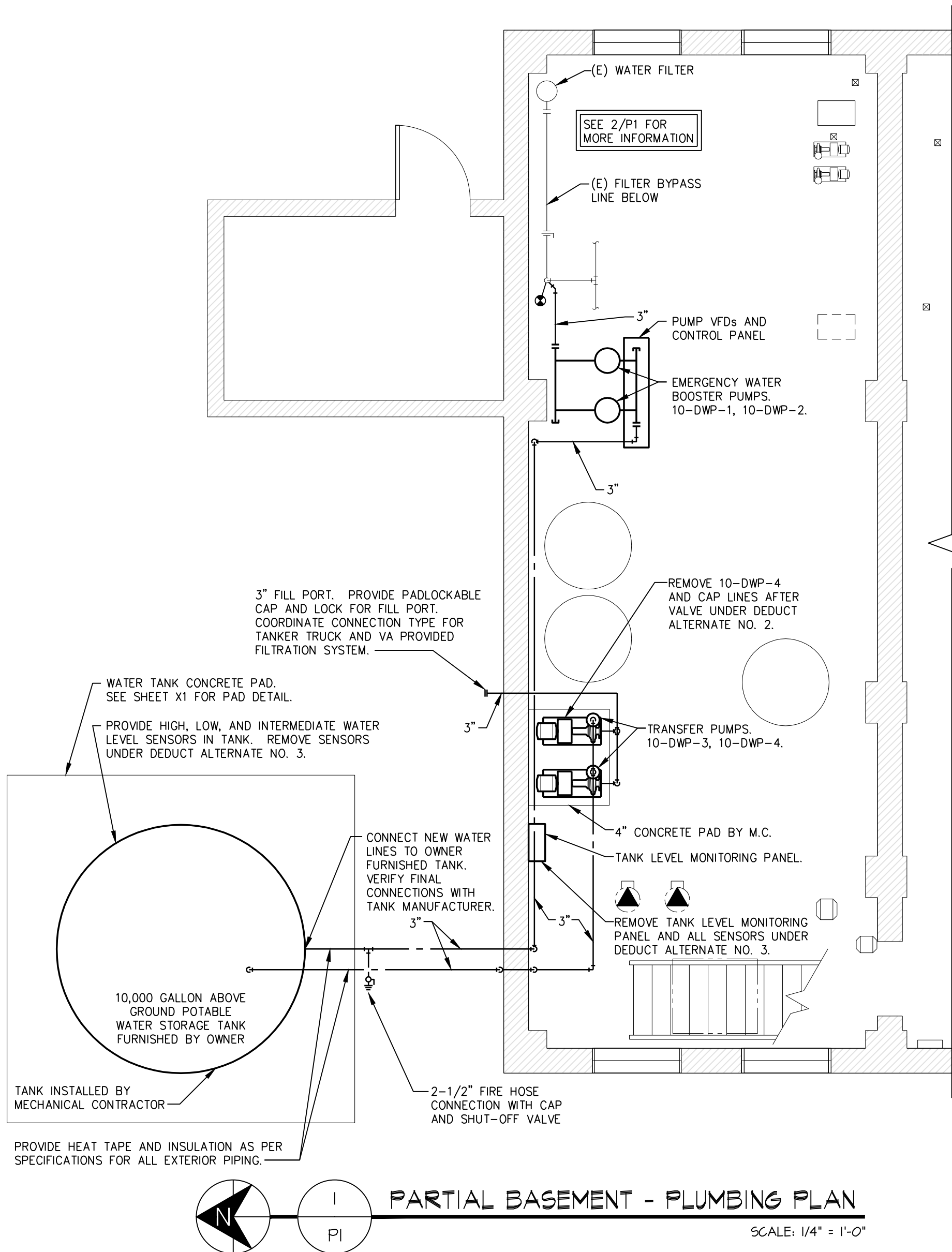
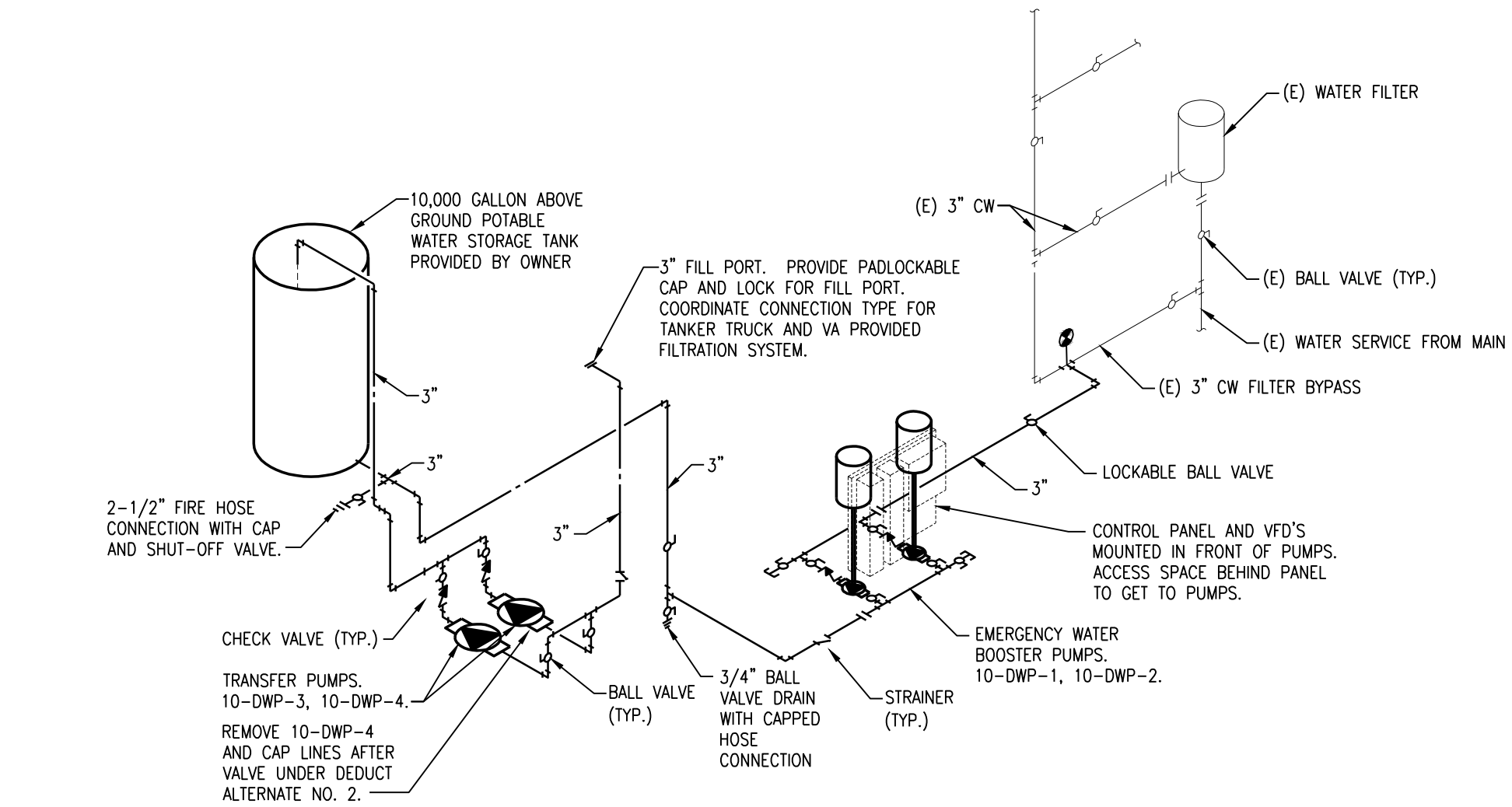
\* ALL SYMBOLS AND ABBREVIATIONS DO NOT NECESSARILY APPEAR ON DRAWINGS

PUMP (PLUMBING) SCHEDULE	
UNIT NO.	LOCATION
10-DWP-1	BLDG. 10 BASEMENT
10-DWP-2	BLDG. 10 BASEMENT
10-DWP-3	BLDG. 10 BASEMENT
10-DWP-4	BLDG. 10 BASEMENT

SYSTEM	FLUID	GPM	HEAD (FT.)	TEMP	SP. GR.	% EFF.	TYPE	HP	VOLT	PH
DOM.	WATER	100	140	50	1.001	-	VC	7.5	480	3
DOM.	WATER	150	30	50	1.001	-	CLCO	2	480	3
DOM.	WATER	150	30	50	1.001	-	CLCO	2	480	3

CLOS. CLOSE COUPLED  
VC VERTICAL STYLE CENTRIFUGAL

NOTES:  
1.



PLUMBING NOTES:

A. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES BETWEEN THE "AS-BUILT" CONDITIONS AND THESE DRAWINGS.

B. COORDINATE ALL PLUMBING INSTALLATION WITH GENERAL, FIRE PROTECTION, VENTILATION, AND ELECTRICAL CONTRACTORS. INSTALL ALL PLUMBING PIPING AS HIGH AS POSSIBLE. PROVIDE ALL NECESSARY OFFSETS (DROPS AND RISES) TO KEEP PLUMBING PIPING TIGHT TO THE STRUCTURE OR DUCTWORK ABOVE. OFFSET PLUMBING PIPING TO AVOID BEAMS.

C. THIS CONTRACTOR SHALL OPEN ALL EXISTING WALLS AND/OR CEILINGS FOR INSTALLATION OF NEW PLUMBING PIPING, EQUIPMENT, ETC. AS REQUIRED. PATCH WALLS AND/OR CEILINGS TO MATCH EXISTING.

D. MAINTAIN 3'-0" CLEAR SPACE IN FRONT OF ALL ELECTRICAL, CONTROL, AND ACCESS PANELS FOR ACCESSIBILITY.